

Abstract of the Disclosure

Direct metal deposition (DMD<sup>TM</sup>), preferably closed-loop DMD, is used to deposit machine-readable codes onto articles with high accuracy, directly from digital data. In different embodiments, the substrate/layer combination may be tailored for improved wear resistance, thermal conductivity, density/hardness, corrosion and/or resistance to corrosion, oxidation or other environmental conditions. Alternatively, the layer(s) of material may be tailored to have specific properties custom-tailored to suit the application. To enhance throughput, code features may be fabricated using a robotic closed-loop DMD arrangement. In concert with the improvements made possible through the tailored outer layer(s), the method may further include the step of incorporating a third dimension by controlling the height of the deposit line in addition to the width.